

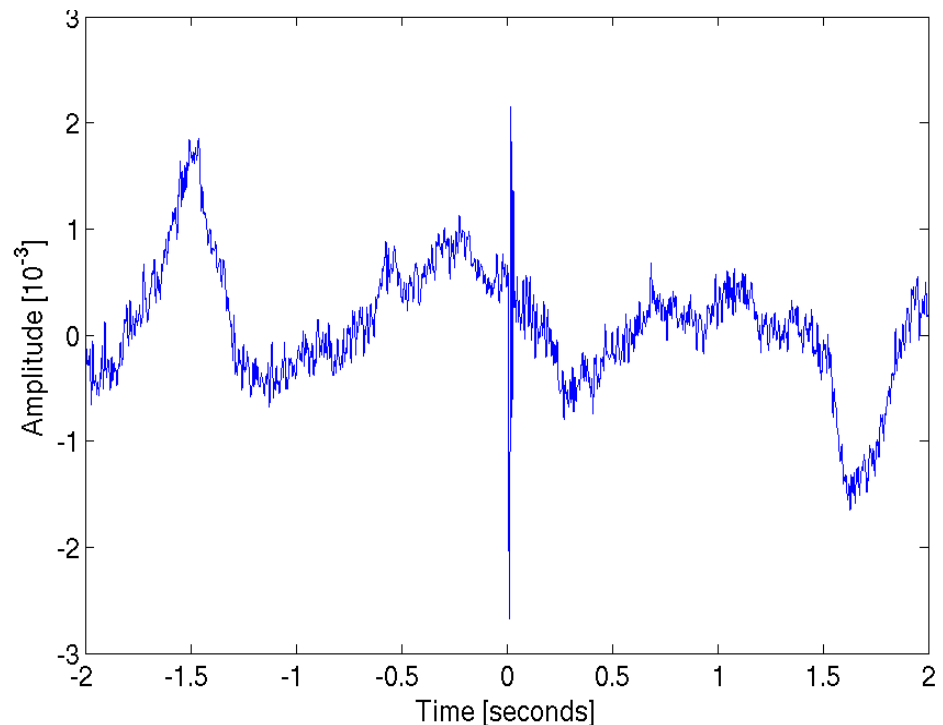
# Used Percentage Veto for LIGO/Virgo Binary Inspiral Searches



Tomoki Isogai,  
for the LIGO Scientific Collaboration and the  
Virgo Collaboration  
Carleton College

A challenge for both the LIGO and Virgo is to understand the origin of non-astrophysical transients that contribute to the background noise, obscuring real astrophysical signals.

**Figure 1:** Time series of an instrumental channel that keeps the output mode cleaner in resonance. This type of glitch shown here was coupling into our main GW output, but UPV vetoed these glitches successfully.



UPV is eliminating transients in the S6/VSR2 data that are hard to be removed by conventional methods.

**Figure 2:** Histogram of triggers before and after UPV is applied. UPV removes many “outliers”, helping to obtain stationary data.

